Costs of Funds: A Comparative Analysis

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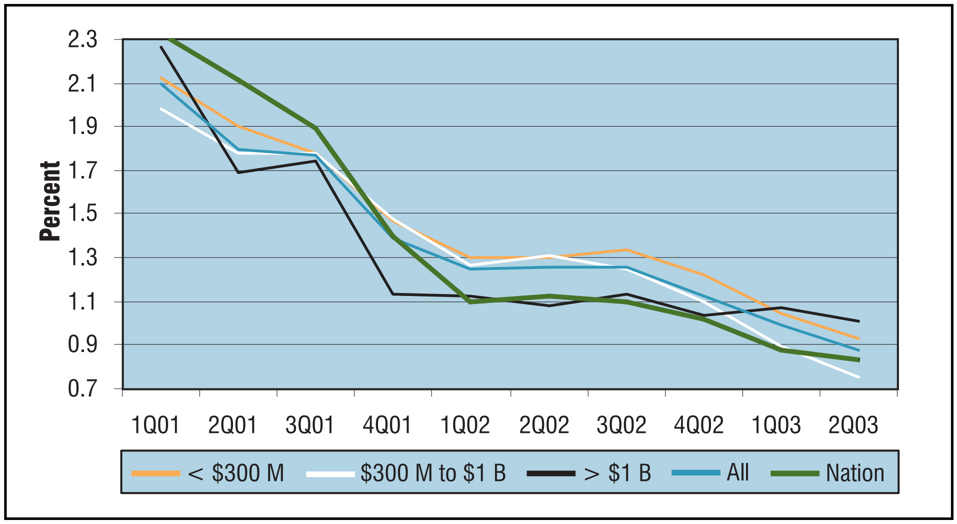
At a recent Bankers' Forum at the Reserve Bank, a banker from a 'small' bank noted the relatively high cost of funds the bank faced, from a competitive perspective. Theory would suggest that larger banks would be able to obtain funds at lower costs than smaller banks in a competitive market. From this banker's observation, two questions arose: first, are there substantial differences in the cost of funds, or its components, across institutions of different asset sizes in the Third District? and, second, how do costs of funds in this District compare to those in some other Districts, as well as in the Nation on average?

Some comparative analysis of trends and relative costs indicates that the Third District, with a large number of banks per capita, has a highly competitive banking market. Some inter-District comparisons suggest that the Third District has a pricey market for small/medium bank funds. Additionally, analysis has shown that there appear to be some post 9/11 effects in relative cost structures. For some types of deposits, it now costs relatively more for smaller institutions to attract funds post 9/11 than for larger institutions.

Third District Cost of Funds

The total cost of funds comprises the interest paid on deposit accounts (NOW accounts, savings deposits, large CDs, and small CDs), and on borrowings (Fed Funds purchased, term Fed Funds, Federal Home Loan Bank (FHLB), Discount Window[1], and commercial paper)[2]. The data for the Third District include adjustments for mergers and acquisitions (M&A) and growth, so as to maintain the same sets of peer banks over the time period from 1Q01 to 2Q03. The categories of bank sizes are small (<$300 million), medium ($300 million to $1 billion), and large (>$1 billion). These sets of banks exclude credit card banks and specialty banks. The data for other Districts and the Nation do not include the M&A adjustments or exclude credit card banks. As a result, peer comparisons are not exact, but somewhat generalized.

Chart 1. Third District NOW Accounts



NOW accounts (Chart 1). Two things are notable in the comparison of interest paid on NOW accounts over this period. First, prior to 9/11 (3Q01), the interest small and medium Third District banks paid fell below the national average. Post 9/11, from 4Q01 through 1Q03, small and medium institutions appear to have paid some premium to continue to keep and attract NOW account deposits. In 2Q03 however, the premium paid by medium-sized institutions appears to have disappeared. Second, large Third District banks may have benefited from size in the post 9/11 period, but also by proximity to large money center banks with lower interest rates. However, for the past two quarters, large Third District banks appear to be paying relatively higher rates, perhaps to retain deposits.

Savings Deposits (Chart 2). Overall in the District, Savings Deposits account for 46 percent of all deposits and 39 percent of total funds obtained. Savings accounts (MMDAs and passbooks) represent 54 percent of deposits at large banks, 41 percent

[1] Borrowings from the Discount Window subsequent to recent policy changes have been negligible.

[2] Trading Liabilities cost is also a component, but immaterial in the Third District.

at medium-sized banks, and 30 percent at small banks (Table 1). The trend behavior of interest rates paid on savings accounts from 1Q01 to 2Q03 shows a clear inverse relationship between rates paid and bank size. Smaller banks pay the highest rates, while large banks pay the lowest.

One explanatory factor, apart from sheer size, for a consistent pattern of relatively higher rates for small institutions is the relatively large number of *de novo* banks, 29, or 27 percent of banks in this group. These banks have had to pay higher rates to attract funds, all other things equal.

Chart 2. Third District Savings Deposits

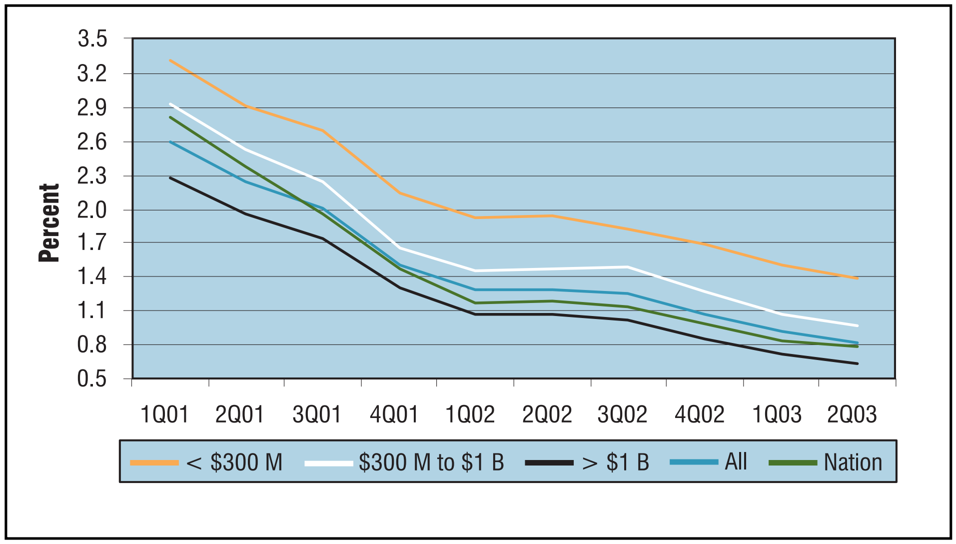
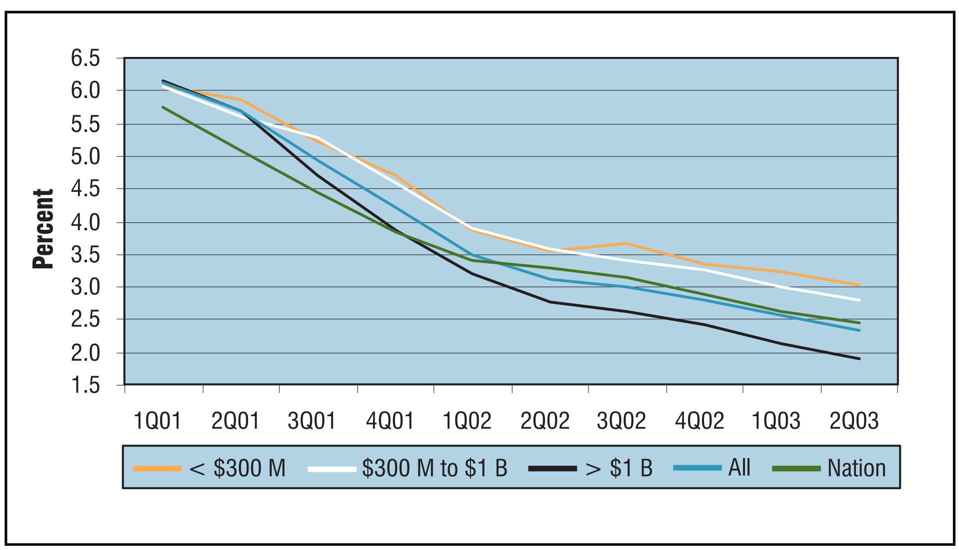


Table 1.

Funding Sources	District Commercial Banks' Funding Sources							
	Savings as % of		Small CDs as % of		Large CDs as % of		Borrowings as % of	
	Deposits	Funds	Deposits	Funds	Deposits	Funds	Deposits	Funds
Small	30%	27%	33%	30%	13%	12%	7%	6%
Medium	41%	34%	30%	25%	9%	8%	14%	12%
Large	54%	45%	18%	15%	13%	11%	9%	8%
All	46%	39%	24%	21%	12%	10%	10%	9%

Large CDs (Chart 3). The structure of CD rates and resultant costs across banks of different sizes changed with the advent of 9/11. Prior to 9/11, the costs faced by all size categories on large CDs tracked together and stood above the national average. Post 9/11, it appears that small and medium institutions have had to pay premium rates to attract this type of deposit.

Chart 3. Third District Large CDs



Small CDs (Chart 4). While banks depend on small CDs as a funding source (33 percent, 30 percent, and 18 percent of deposits for small, medium, and large banks, respectively), small CD deposits grew very little compared to savings deposits as money flowed out of the stock market. Expectations of interest rate increases, rather than further decreases, contributed to customers' unwillingness to lock in long-term CD rates. Since 3Q01, there has been no divergence in cost of small CDs across institutions' sizes. Banks may have tied the rates offered to LIBOR, or played follow the leader. CD advertising on the Internet and the ease of rate shopping also may have played a

Chart 4. Third District Small CDs

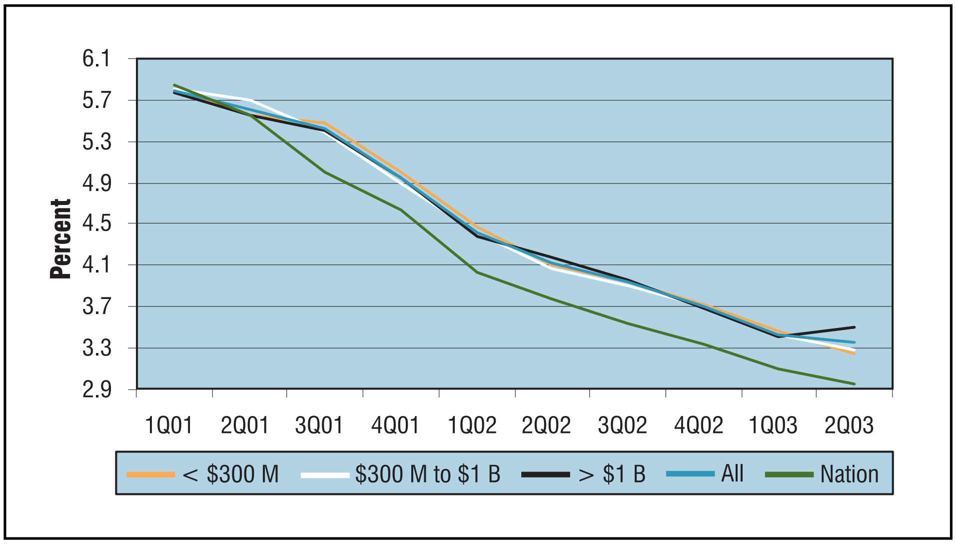


Chart 5. Third District Borrowings

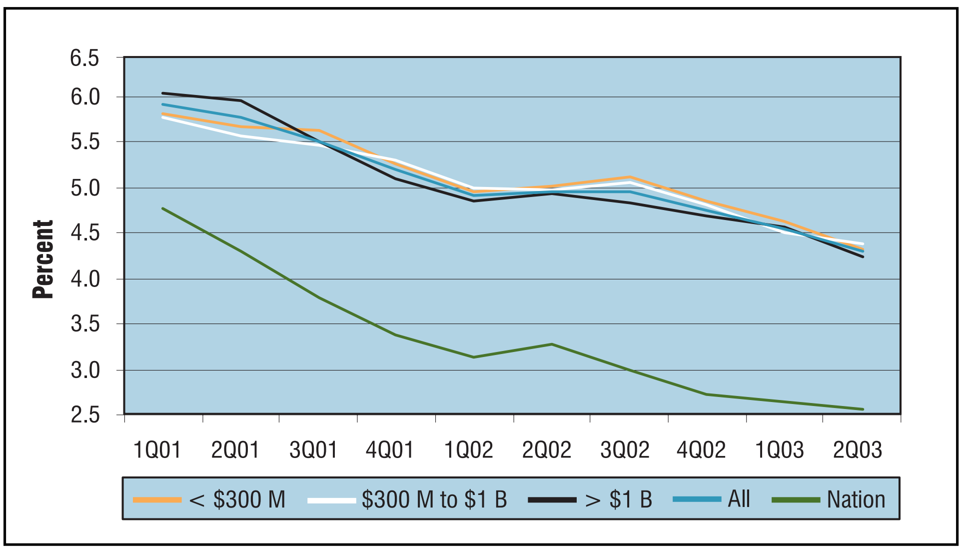
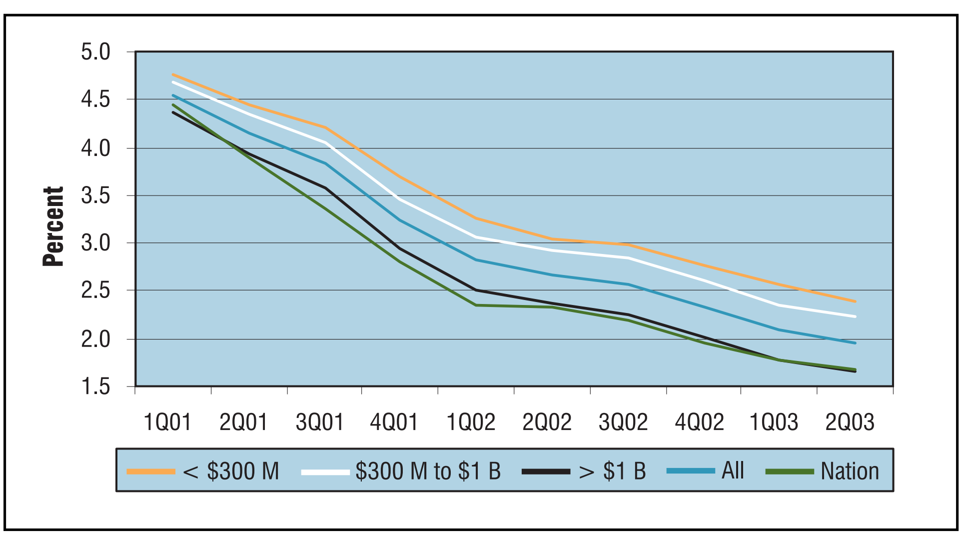


Chart 6. Third District Overall Cost of Funds



role in establishment of almost identical rates.

Borrowings (Chart 5). Borrowings include purchases of Fed Funds, advances from the Federal Home Loan Bank, loans from correspondent banks, and other sources, such as commercial paper sales. Third District banks are net sellers of Fed Funds and appear to pay relatively low rates when they borrow in that market. Looking at Other Borrowings, however, there is a striking difference between the rates paid by Third District banks of all sizes and the national average. This spread has widened as well over this period, to 175bp, as of 2Q03.

This difference is fairly easy to explain. The main sources of borrowings are commercial paper (CP) and the FHLB. The CP rates paid by large, money-center banks, about 100+bp, drive the national average costs. By contrast, most Third District bank borrowing represents FHLB advances at considerably higher rates.

A significant 60 percent of FHLB borrowings are in maturities of over 3 years. Many banks borrowed at rates near 6 percent three or more years ago and face high average borrowing costs, despite the very low, current interest rate environment. The average ratio of borrowings of longer than one year to total FHLB borrowings among this District's borrowers is 77 percent. Total FHLB borrowings represent 10 percent of deposits and 7 percent of total assets.

Overall Cost of Funds (Chart 6). The overall cost of funds for deposits plus borrowings indicates that, while average costs have fallen, the expected reverse relationship between size and costs has persisted. Furthermore, the premium paid by small and medium institutions since 9/11, measured by the spread, appears to have increased somewhat. Size appears to have provided some added advantage in attracting deposits in the more uncertain post 9/11 environment. The market appears to have become more competitive for small and medium banks.

Interdistrict Comparisons

The second question to address is whether or not Third District deposit/borrowing costs are higher or lower than in other Districts. We chose two Districts, Chicago and Atlanta, that have a mix of large regional, medium, and small institutions, and a third, Kansas City, that has a preponderance of community banks.

Looking at the overall cost of deposits (Chart 7), the Philadelphia District's costs stand slightly higher than those in Atlanta, Kansas City, and Chicago, despite compression of these interest costs since 1Q01. As of 2Q03, these four Districts' deposit costs were 21 to 27 bps above the national average.

On a component basis, some compression of rates paid has occurred for NOW and savings accounts, but the reverse has occurred for large CDs and small CDs and there appear to be regional differences larger than those in 1Q01. This development may reflect differential post 9/11 uncertainty effects in the large CD market, but it is difficult to know. As of 2Q03, Third District banks faced a cost of 20 to 46 bps more for small CDs than banks in these other Districts. Different patterns of run-off of short-term CDs may help explain the differences, as may some post 9/11 effects.

Chart 7. Overall Cost of Deposits by District

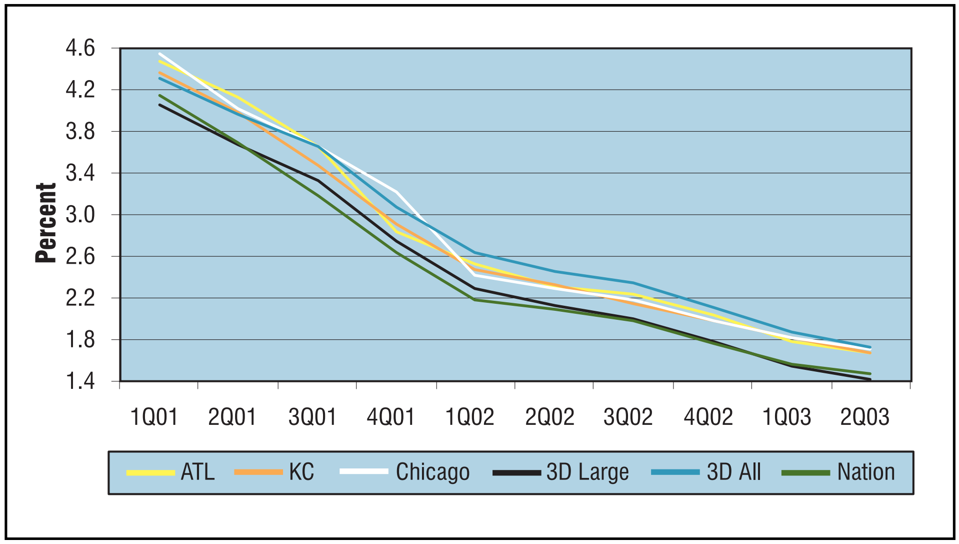
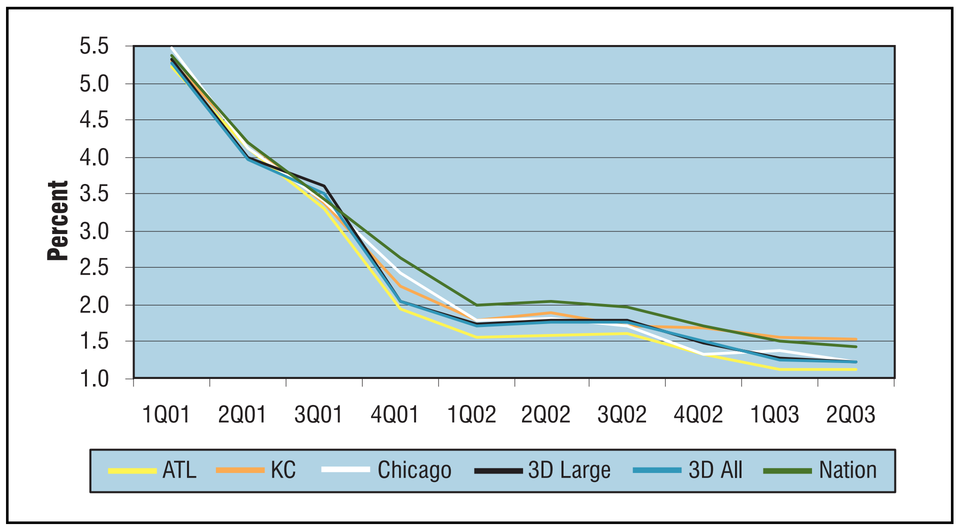


Chart 8. Fed Funds Purchased by District



Turning to comparisons of types of Borrowings (Charts 8 and 9), the rates on purchased Fed Funds, which showed little dispersion across Districts prior to 9/11, show more divergence as of 2Q03. The rates paid by banks in the Philadelphia, Atlanta, and Chicago Districts fall 32-43bps below those of Kansas City and 19 to 30 bps below the national average. Other borrowings, made up primarily of commercial paper, FHLB advances, trading liabilities, and term Fed Funds, show distinct differences. Third District costs surpass the nation's average (driven by the CP rate) as mentioned above, but they also exceed those of the Atlanta, Kansas City, and Chicago Districts by a wider margin than in 1Q01. Chicago's lower rates may reflect more activity in the CP market. Use of term Fed Funds also may be a factor in Atlanta and Kansas City, as may different tenors of FHLB borrowing. Regardless, Third District activity in FHLB borrowing, with a relatively high percentage of long-term maturity advances, appears to have resulted in higher Third District borrowing costs. Therefore, as of 2Q03, the Third District average topped the

Chart 9. Borrowings by District

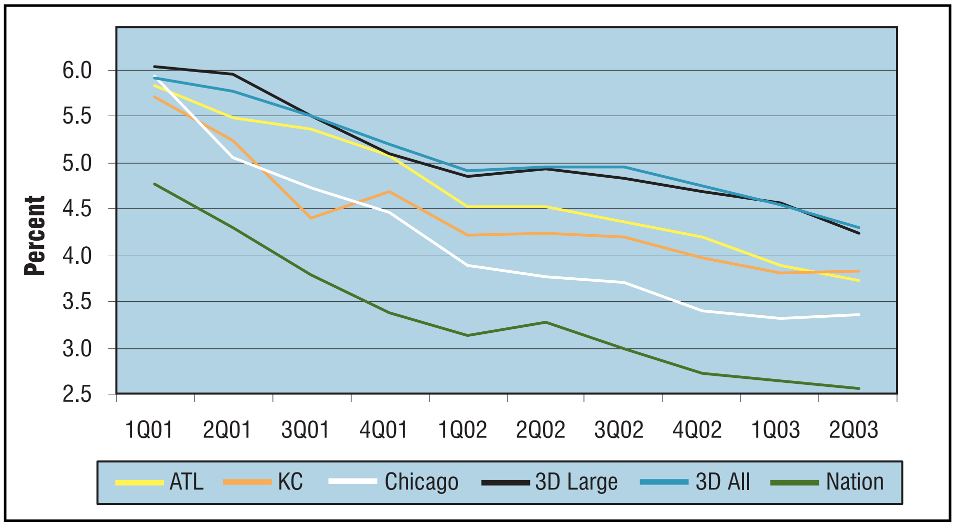


Chart 10. Cost of Funds by District

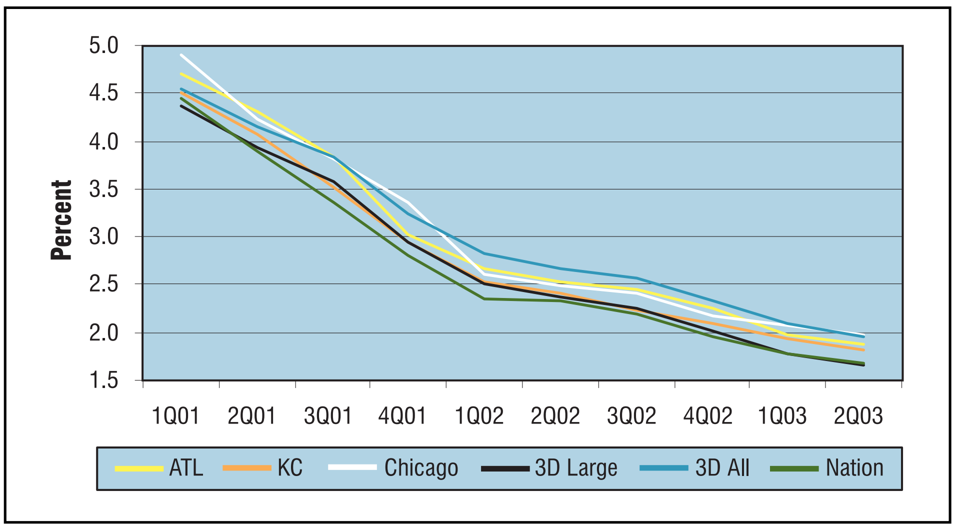
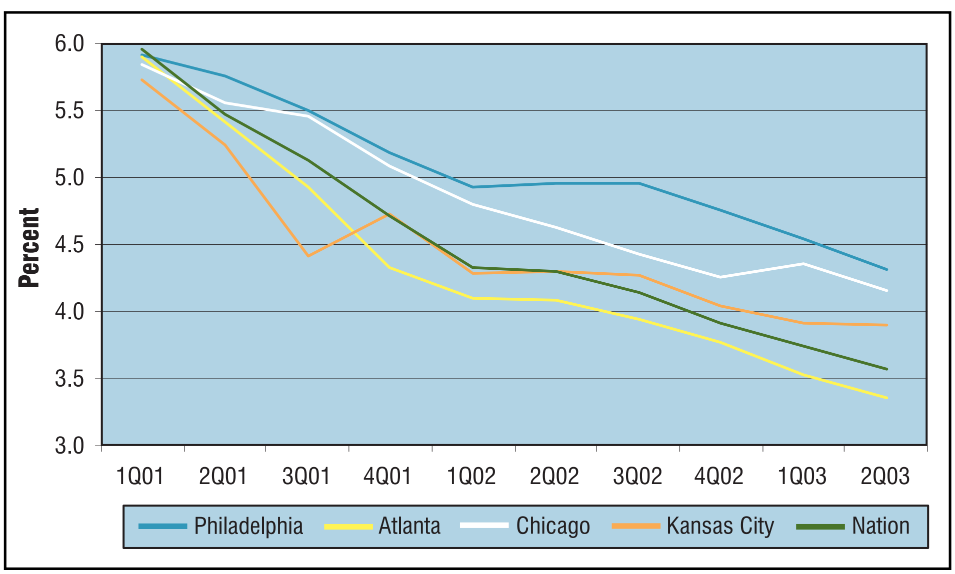


Chart 11. Cost of Borrowings for Commercial Banks with Assets Less than $10 Billion



Cost of Funds chart (Chart 10).

The Borrowings in Chart 9 show data for banks in several Federal Reserve Districts and the Nation representing banks of all sizes. Given the inclusion of the largest banks with access to the CP market, where borrowing costs are relatively low, it would be interesting to look at a subset of banks with assets less than $10 billion for District comparisons of borrowing costs.

Chart 11, which displays these relative costs, shows increased divergence of costs post 9/11 and confirms the higher borrowing costs associated with these Philadelphia District institutions. For this subset, the Atlanta District banks' average borrowing costs are close to 100bp lower than Philadelphia's. The relative positions of costs in other Districts change for this subset compared to the all bank picture.

Conclusion

The analysis and observations drawn from the cost of funds data for the period 1Q01 to 2Q03 have confirmed the 'small' banker's sense that the banking market in this District is very competitive. Not only did the data show the expected, an inverse relationship between size and cost of funds, but it revealed the probable existence of a post 9/11 effect that has given size some additional comparative advantage. The data also revealed that the Third District large banks that have relied on long-term maturity advances from the FHLB for some of their funding have the highest relative borrowing costs, compared to the averages of all banks and a subset of banks in several other Reserve Districts and the nation.